

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)  
217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: Fri May 25 14:13:26 EDT 2007

=====

Application No: 10509950 Version No: 2.0

Input Set:

Output Set:

Started: 2007-05-24 13:03:26.184  
Finished: 2007-05-24 13:03:29.536  
Elapsed: 0 hr(s) 0 min(s) 3 sec(s) 352 ms  
Total Warnings: 13  
Total Errors: 0  
No. of SeqIDs Defined: 17  
Actual SeqID Count: 17

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)

# SEQUENCE LISTING

<110> Evotec NeuroSciences GmbH

<120> cAMP-Regulated Phosphorprotein for Diagnostic and  
Therapeutic Use in Neurodegenerative Diseases

<130> 020880ep

<140> 10509950

<141> 2004-12-30

<150> EP02007522.2

<151> 2002-04-02

<160> 17

<170> PatentIn Ver. 2.1

<210> 1

<211> 813

<212> PRT

<213> Homo sapiens

<400> 1

Met Ser Glu Gln Gly Asp Leu Asn Gln Ala Ile Ala Glu Glu Gly Gly  
1 5 10 15

Thr Glu Gln Glu Thr Ala Thr Pro Glu Asn Gly Ile Val Lys Ser Glu  
20 25 30

Ser Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Glu Ala  
35 40 45

Gln Asn Gln Glu Arg Arg Lys Ser Lys Ser Gly Ala Gly Lys Gly Lys  
50 55 60

Leu Thr Arg Ser Leu Ala Val Cys Glu Glu Ser Ser Ala Arg Pro Gly  
65 70 75 80

Gly Glu Ser Leu Gln Asp Gln Glu Ser Ile His Leu Gln Leu Ser Ser  
85 90 95

Phe Ser Ser Leu Gln Glu Glu Asp Lys Ser Arg Lys Asp Asp Ser Glu  
100 105 110

Arg Glu Lys Glu Lys Asp Lys Asn Lys Asp Lys Thr Ser Glu Lys Pro  
115 120 125

Lys Ile Arg Met Leu Ser Lys Asp Cys Ser Gln Glu Tyr Thr Asp Ser  
130 135 140

Thr Gly Ile Asp Leu His Glu Phe Leu Ile Asn Thr Leu Lys Asn Asn  
145 150 155 160

Ser Arg Asp Arg Met Ile Leu Leu Lys Met Glu Gln Glu Ile Ile Asp  
165 170 175

Phe	Ile	Ala	Asp	Asn	Asn	Asn	His	Tyr	Lys	Lys	Phe	Pro	Gln	Met	Ser	
			180					185					190			
Ser	Tyr	Gln	Arg	Met	Leu	Val	His	Arg	Val	Ala	Ala	Tyr	Phe	Gly	Leu	
			195				200					205				
Asp	His	Asn	Val	Asp	Gln	Thr	Gly	Lys	Ser	Val	Ile	Ile	Asn	Lys	Thr	
			210			215					220					
Ser	Ser	Thr	Arg	Ile	Pro	Glu	Gln	Arg	Phe	Cys	Glu	His	Leu	Lys	Asp	
			225		230					235						240
Glu	Lys	Gly	Glu	Glu	Ser	Gln	Lys	Arg	Phe	Ile	Leu	Lys	Arg	Asp	Asn	
				245					250					255		
Ser	Ser	Ile	Asp	Lys	Glu	Asp	Asn	Gln	Ser	Val	Cys	Ser	Gln	Glu	Ser	
			260				265						270			
Leu	Phe	Val	Glu	Asn	Ser	Arg	Leu	Leu	Glu	Asp	Ser	Asn	Ile	Cys	Asn	
			275				280					285				
Glu	Thr	Tyr	Lys	Lys	Arg	Gln	Leu	Phe	Arg	Gly	Asn	Arg	Asp	Gly	Ser	
			290			295					300					
Gly	Arg	Thr	Ser	Gly	Ser	Arg	Gln	Ser	Ser	Ser	Glu	Asn	Glu	Leu	Lys	
			305		310					315						320
Trp	Ser	Asp	His	Gln	Arg	Ala	Trp	Ser	Ser	Thr	Asp	Ser	Asp	Ser	Ser	
				325				330							335	
Asn	Arg	Asn	Leu	Lys	Pro	Ala	Met	Thr	Lys	Thr	Ala	Ser	Phe	Gly	Gly	
			340				345						350			
Ile	Thr	Val	Leu	Thr	Arg	Gly	Asp	Ser	Thr	Ser	Ser	Thr	Arg	Ser	Thr	
			355			360						365				
Gly	Lys	Leu	Ser	Lys	Ala	Gly	Ser	Glu	Ser	Ser	Ser	Ser	Ala	Gly	Ser	
			370			375					380					
Ser	Gly	Ser	Leu	Ser	Arg	Thr	His	Pro	Pro	Leu	Gln	Ser	Thr	Pro	Leu	
			385		390					395						400
Val	Ser	Gly	Val	Ala	Ala	Gly	Ser	Pro	Gly	Cys	Val	Pro	Tyr	Pro	Glu	
				405					410							415
Asn	Gly	Ile	Gly	Gly	Gln	Val	Ala	Pro	Ser	Ser	Thr	Ser	Tyr	Ile	Leu	
			420				425						430			
Leu	Pro	Leu	Glu	Ala	Ala	Thr	Gly	Ile	Pro	Pro	Gly	Ser	Ile	Leu	Leu	
			435			440						445				
Asn	Pro	His	Thr	Gly	Gln	Pro	Phe	Val	Asn	Pro	Asp	Gly	Thr	Pro	Ala	
			450			455					460					
Ile	Tyr	Asn	Pro	Pro	Thr	Ser	Gln	Gln	Pro	Leu	Arg	Ser	Ala	Met	Val	
				465		470				475						480

Gly	Gln	Ser	Gln	Gln	Gln	Pro	Pro	Gln	Gln	Gln	Pro	Ser	Pro	Gln	Pro			485	490	495
Gln	Gln	Gln	Val	Gln	Pro	Pro	Gln	Pro	Gln	Met	Ala	Gly	Pro	Leu	Val			500	505	510
Thr	Gln	Ser	Val	Gln	Gly	Leu	Gln	Ala	Ser	Ser	Gln	Ser	Val	Gln	Tyr			515	520	525
Pro	Ala	Val	Ser	Phe	Pro	Pro	Gln	His	Leu	Leu	Pro	Val	Ser	Pro	Thr			530	535	540
Gln	His	Phe	Pro	Met	Arg	Asp	Asp	Val	Ala	Thr	Gln	Phe	Gly	Gln	Met			545	550	555
Thr	Leu	Ser	Arg	Gln	Ser	Ser	Gly	Glu	Thr	Pro	Glu	Pro	Pro	Ser	Gly			565	570	575
Pro	Val	Tyr	Pro	Ser	Ser	Leu	Met	Pro	Gln	Pro	Ala	Gln	Gln	Pro	Ser			580	585	590
Tyr	Val	Ile	Ala	Ser	Thr	Gly	Gln	Gln	Leu	Pro	Thr	Gly	Gly	Phe	Ser			595	600	605
Gly	Ser	Gly	Pro	Pro	Ile	Ser	Gln	Gln	Val	Leu	Gln	Pro	Pro	Pro	Ser			610	615	620
Pro	Gln	Gly	Phe	Val	Gln	Gln	Pro	Pro	Pro	Ala	Gln	Met	Pro	Val	Tyr			625	630	635
Tyr	Tyr	Pro	Ser	Gly	Gln	Tyr	Pro	Thr	Ser	Thr	Thr	Gln	Gln	Tyr	Arg			645	650	655
Pro	Met	Ala	Pro	Val	Gln	Tyr	Asn	Ala	Gln	Arg	Ser	Gln	Gln	Met	Pro			660	665	670
Gln	Ala	Ala	Gln	Gln	Ala	Gly	Tyr	Gln	Pro	Val	Leu	Ser	Gly	Gln	Gln			675	680	685
Gly	Phe	Gln	Gly	Leu	Ile	Gly	Val	Gln	Gln	Pro	Pro	Gln	Ser	Gln	Asn			690	695	700
Val	Ile	Asn	Asn	Gln	Gln	Gly	Thr	Pro	Val	Gln	Ser	Val	Met	Val	Ser			705	710	715
Tyr	Pro	Thr	Met	Ser	Ser	Tyr	Gln	Val	Pro	Met	Thr	Gln	Gly	Ser	Gln			725	730	735
Gly	Leu	Pro	Gln	Gln	Ser	Tyr	Gln	Gln	Pro	Ile	Met	Leu	Pro	Asn	Gln			740	745	750
Ala	Gly	Gln	Gly	Ser	Leu	Pro	Ala	Thr	Gly	Met	Pro	Val	Tyr	Cys	Asn			755	760	765
Val	Thr	Pro	Pro	Thr	Pro	Gln	Asn	Asn	Leu	Arg	Leu	Ile	Gly	Pro	His			770	775	780

Cys Pro Ser Ser Thr Val Pro Val Met Ser Ala Ser Cys Arg Thr Asn  
785 790 795 800

Cys Ala Ser Met Ser Asn Ala Gly Trp Gln Val Lys Phe  
805 810

<210> 2

<211> 2442

<212> DNA

<213> Homo sapiens

<400> 2

```

atgtctgagc aaggagacct gaatcaggca atagcagagg aaggagggac tgagcaggag 60
acggccactc cagagaacgg cattgttaaa tcagaaagtc tggatgaaga ggagaaactg 120
gaactgcaga ggcggctgga ggctcagaat caagaaagaa gaaaatccaa gtcaggagca 180
ggaaaaggta aactgactcg cagycttgct gtctgtgagg aatcttctgc cagaccagga 240
ggtgaaagtc ttcaggatca ggaatcaatt catttacagc tttccagttt ttccagcctg 300
caagaggagg ataaatctag gaaagatgac tctgaaagag aaaaagaaaa ggataaaaac 360
aaagataaaa cctctgaaaa acccaagatc agaatgttat caaaagattg cagccaagaa 420
tacacggatt ctacaggcat agacttacac gagtttctga ttaacacatt aaagaataat 480
tccagggaca ggatgatact tttgaaaatg gagcaggaaa ttattgattt cattgctgac 540
aacaataatc attataaaaa gttccctcag atgtcatcgt atcagaggat gcttgtccat 600
cgagtggcag cttatthttgg attggatcac aatgtggatc aaacaggaaa atctgttatc 660
atcaacaaga ccagcagcac cagaatacca gagcaaaggt tttgtgaaca tttaaaagat 720
gaaaaaggtg aagaatccca gaagcggttt atcttgaagc gagataactc tagtatatgat 780
aaagaagaca atcagtcagt ttgctcccag gaaagccttt ttgtggaaaa cagtaggctc 840
ttggaagaca gtaacatatg caatgagacc tataagaaaa gacagctctt tcggggcaac 900
agagatggct cagggagaac atctgggagt cgacagagca gctcagaaaa tgaactcaag 960
tggctctgacc accaaagggc ctggagcagc acagactccg acagttccaa ccgcaatcta 1020
aagcccgcga tgaccaagac ggcgagttht gggggcatca cgggtgctgac caggggtgac 1080
agcacttcca gtactaggag taccgggaag ctgtccaaag caggttccga gtcttccagc 1140
agtgcaggct cctcaggatc gctgtcccgc acccatccac ctctccagag cacaccctta 1200
gtctcagggtg tggcagctgg ctctccaggc tgtgtgcctt atccagagaa tggaaataggg 1260
ggccaggttg ctcccagcag caccagctac atctccttc cacttgaagc tgcaacaggc 1320
atcccgcctg gaagcatcct tcttaatcca cacacaggcc agccctttgt gaatcccgat 1380
ggaactcctg caatatacaa cccaccacc agtcagcagc ccctgcgaag cgccatggtg 1440
gggcagtcctc aacagcagcc gccacagcag cagccctccc cgcagcccca acagcaggtc 1500
cagccaccgc agccacagat ggcaggccct ctggtcactc agtctgtcca ggggctgcag 1560
gcttctctccc agtcagtgc aatatacggca gtctcttttc ctcccagca cctcctacct 1620
gtgtctccaa cgcagcactt tcccatgaga gatgatgtgg caacacagtt tggccagatg 1680
accctgagcc ggcagtcctc ggggggagact cctgaacccc catcagggtc tgtctacca 1740
tcctccctta tgccacagcc gggccagcag cccagctatg taatcgcctc tacaggccag 1800
cagcttctta caggaggatt ctcaggctct ggccctccca tctcccagca ggtcctccag 1860
ccccctcct caccacaggg attcgtgcaa cagcctccgc ctgcacagat gcctgtatat 1920
tattacccat ctgggtcagta ccctacctca accacgcaac agtaccggcc catggccccg 1980
gttcagtaca acgctcagag gagtcaacag atgccacagg cagcacagca agcaggttac 2040
cagccagtct tgtctgggtc acagggatc caaggcctaa taggagtgc gacgccacct 2100
cagagtcaga acgtgataaa taaccaacaa ggaactccgg tgcaaagcgt gatggtttcc 2160
taccaacaa tgtcttctta tcagggtgcca atgaccagg gttctcaagg actgccccag 2220
cagtcatacc aacagccaat catgtacct aaccaggcag gtcaagggtc actcccagcc 2280
actggaatgc ctgtttactg taatgtcaca ccgcccaccc ctcaagaaca ccttaggctg 2340
attggccac actgcccctc cagcactgtc ccagtgatgt cagctagctg cagaacaaac 2400
tgtgcaagta tgagcaatgc tgggtggcag gtcaaattct ga 2442

```

<210> 3  
<211> 3212  
<212> DNA  
<213> Homo sapiens

<400> 3

```
gtgatttgct ggaagctggt cattagtgtt gacgatgtgt cacactgtgt aagggaatcg 60
catggagatg ggcattccga actgttaatg gggacatggg actccagttg tctctgatca 120
cttgtgtgga ttttcctggc gtagaacgac agaagccgct agtaagtcgc caagacctac 180
agcaggaatt ctgcacaaaa gggcataaaa tcttgttatt ttaatttgca tctgggagaa 240
tgtctgagca aggagacctg aatcaggcaa tagcagagga aggagggact gagcaggaga 300
cggccactcc agagaacggc attgttaaatt cagaaagtct ggatgaagag gagaaactgg 360
aactgcagag ggggctggag gctcagaatc aagaaagaag aaaatccaag tcaggagcag 420
gaaaaggtaa actgactcgc agycttgctg tctgtgagga atcttctgcc agaccaggag 480
gtgaaagtct tcaggatcag gaatcaattc atttacagct ttccagtttt tccagcctgc 540
aagaggagga taaatctagg aaagatgact ctgaaagaga aaaagaaaag gataaaaaaca 600
aagataaaac ctctgaaaaa cccaagatca gaatgttatt aaaagattgc agccaagaat 660
acacggattc tacaggcata gacttacacg agtttctgat taacacatta aagaataatt 720
ccagggacag gatgatactt ttgaaaatgg agcaggaaat tattgatttc attgctgaca 780
acaataatca ttataaaaag ttccctcaga tgtcatcgta tcagaggatg cttgtccatc 840
gagtggcagc ttattttgga ttggatcaca atgtggatca aacaggaaaa tctgttatca 900
tcaacaagac cagcagcacc agaataccag agcaaagggt ttgtgaacat ttaaaagatg 960
aaaaagggtga agaatcccag aagcgggttta tcttgaagcg agataactct agtattgata 1020
aagaagacaa tcagtcagtt tgtctccagg aaagcctttt tgtgaaaaac agtaggctct 1080
tggaagacag taacatatgc aatgagacct ataagaaaag acagctcttt cggggcaaca 1140
gagatggctc agggagaaca tctgggagtc gacagagcag ctcaaaaaat gaactcaagt 1200
ggtctgacca ccaaagggcc tggagcagca cagactccga cagttccaac cgcaatctaa 1260
agcccgccat gaccaagacg gcgagttttg ggggcatcac ggtgctgacc aggggtgaca 1320
gcacttccag tactaggagt accgggaagc tgtccaaagc aggttccgag tcttccagca 1380
gtgcaggctc ctcaggatcg ctgtcccgca cccatccacc tctccagagc acaccctag 1440
tctcagggtgt ggcagctggc tctccaggct gtgtgcctta tccagagaat ggaatagggg 1500
gccaggttgc tcccagcagc accagctaca tcctccttcc acttgaagct gcaacaggca 1560
tcccgcctgg aagcatcctt cttaatccac acacaggcca gccctttgtg aatcccgatg 1620
gaactcctgc aatatacaac ccaccacca gtacgcagcc cctgcgaagc gccatggtgg 1680
ggcagtccca acagcagccg ccacagcagc agccctcccc gcagcccca cagcaggtcc 1740
agccaccgca gccacagatg gcaggccctc tggctactca gtctgtccag gggctgcagg 1800
cttcctcca gtcatgcaa tatccggcag tctcttttcc tcccagcac ctctacctg 1860
tgtctccaac gcagcacttt cccatgagag atgatgtggc aacacagttt ggccagatga 1920
ccttgagccg gcagtcctcg ggggagactc ctgaaccccc atcaggtcct gtctaccat 1980
cctcccttat gccacagccg gccacgcagc ccagctatgt aatcgctct acaggccagc 2040
agcttcttac aggaggattc tcaggctctg gccctcccat ctcccagcag gtctctcagc 2100
cccctccctc accacaggga ttctgtgcaac agcctccgcc tgcacagatg cctgtatatt 2160
attaccctac tggtcagtac cctacctcaa ccacgcaaca gtaccggccc atggccccgg 2220
ttcagtacaa cgctcagagg agtcaacaga tgccacagge agcacagcaa gcaggttacc 2280
agccagtctt gtctgggtcaa cagggattcc aaggcctaag aggagtgcag cagccacctc 2340
agagtcaaaa cgtgataaat aaccaacaag gaactccggg gcaaagcgtg atggtttcct 2400
accaacaat gtcttcttat cagggtgcaa tgaccagggt ttctcaagga ctgccccagc 2460
agtcatacca acagccaatc atgtacctta accaggcagg tcaagggtca ctcccagcca 2520
ctggaatgcc tgtttactgt aatgtcacac cgcccccccc tcagaacaac cttaggctga 2580
ttggcccaca ctgcccctcc agcactgtcc cagtgtgtgc agctagctgc agaacaaact 2640
gtgcaagtat gagcaatgct ggttggcagg tcaaattctg agagctctgg ctgtggtaca 2700
tttcttcaga tatttctcat ggcctttgat ggaagaggaa caagggtggg aaactggctg 2760
aggacttaag tattcactca acactcaaat gattgtctgt ggtattctgt aaaaagtaaa 2820
caaagactaa tatacacggt agctgggttaa tgggtgcata ttctgtcatg tctgctaggt 2880
atgcctttat agcttagcta gtgacatgaa ttcatcaagg taagattctc tctaccact 2940
gaataccact gtgtagatta taatatccct aatttggatt agttttgtac tttgtgttga 3000
```

gtttgtgatg ctaaaagtat ttaaaaatta tataactaaat cacattgtac caaagctgta 3060  
atggaaaagc aaagaagaac tgatgaattg aaggaataat ttatatacat tatagagttt 3120  
tcttttttaa tggatatata ctgtattgta gtgtttaatc aaaataaaac tatttgacct 3180  
tatggaggaa ggtcatgttt ttaccactaa aa 3212

<210> 4

<211> 69

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Amplified  
DNA

<400> 4

acagccaatc atgtaccta accaggcagg tcaagggtca ctcccagcca ctggaatgcc 60  
tgtttactg 69

<210> 5

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: DNA Primer

<400> 5

acagccaatc atgtaccta acc 23

<210> 6

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: DNA Primer

<400> 6

acagtaaaca ggcattccag tgg 23

<210> 7

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: DNA Primer

<400> 7

actgaagcac tacgggcctg 20

<210> 8



<211> 19  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: DNA Primer  
  
<400> 8  
agccgttggt gtctttgcc 19

<210> 9  
<211> 20  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: DNA Primer  
  
<400> 9  
ggtcaaattt accctggcca 20

<210> 10  
<211> 22  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: DNA Primer  
  
<400> 10  
tctcatcaag cgtcagcagt tc 22

<210> 11  
<211> 19  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: DNA Primer  
  
<400> 11  
tggaacggtg aaggtgaca 19

<210> 12  
<211> 19  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: DNA Primer  
  
<400> 12  
ggcaaggac ttctgtaa 19

<210> 13  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: DNA Primer  
  
 <400> 13  
 cgtcatgggt gtgaaccatg 20

<210> 14  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: DNA Primer  
  
 <400> 14  
 gctaagcagt tgggtggtgca g 21

<210> 15  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: DNA Primer  
  
 <400> 15  
 gtcgctggtc agttcgtgat t 21

<210> 16  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: DNA Primer  
  
 <400> 16  
 agcagttggc tgttgtagct ctc 23

<210> 17  
 <211> 807  
 <212> PRT  
 <213> Mus musculus

<220>  
 <221> PEPTIDE  
 <222> (1)..(807)

<400> 17

Met Ser Glu Gln Gly Gly Leu Thr Pro Thr Ile Leu Glu Glu Gly Gln  
1 5 10 15

Thr Glu Pro Glu Ser Ala Pro Glu Asn Gly Ile Leu Lys Ser Glu Ser  
20 25 30

Leu Asp Glu Glu Glu Lys Leu Glu Leu Gln Arg Arg Leu Ala Ala Gln  
35 40 45

Asn